BEFORE THE ARIZONA CORPORATION COMMISSION

MARC SPITZER
Chairman
WILLIAM A. MUNDELL
Commissioner
JEFF HATCH-MILLER
Commissioner
MIKE GLEASON
Commissioner
KRISTIN K. MAYES
Commissioner

IN THE MATTER OF THE APPLICATION OF ARIZONA PUBLIC SERVICE COMPANY FOR A HEARING TO DETERMINE THE FAIR VALUE OF THE UTILITY PROPERTY OF THE COMPANY FOR RATEMAKING PURPOSES, TO FIX A JUST AND REASONABLE RATE OF RETURN THEREON TO APPROVE RATE SCHEDULES DESIGNED TO DEVELOP SUCH RETURN, AND FOR APPROVAL OF PURCHASED POWER CONTRACT	DOCKET NO. E-01345A-03-0437

REDACTED

DIRECT TESTIMONY

OF

HARVEY SALGO

ON BEHALF OF THE

UTILITIES DIVISION

ARIZONA CORPORATION COMMISSION

FEBRUARY 3, 2004

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I. INTRODUCTION

Q. What is your name and business address?

A. My name is Harvey Salgo and my business address is La Capra Associates, 20 Winthrop Square, Boston, Massachusetts.

Q. On whose behalf are you testifying in this proceeding?

A. I am testifying on behalf of the Arizona Corporation Commission (Commission) Staff.

Q. Please describe your background and experience.

A. I am a Principal at La Capra Associates, where I have been since 1992. I am both an economist and an attorney, although any legal work I do now is quite limited in both scope and subject matter. Prior to joining La Capra Associates, I was an assistant professor of economics at the University of Vermont (1969-74), an attorney/economist at the then-named Massachusetts Department of Public Utilities (1977-78), a partner in the law firm of Salgo&Lee (1978-87), and a consultant at the Tellus Institute (1987-92).

Throughout my experience, I have worked extensively in regulation, industry structure and competitive markets, competitive procurement, and planning. In addition to numerous U.S. clients, I have been a long-term advisor to the World Bank and have worked extensively for it and other development banks or agencies in a number of countries. I have recently worked in matters related to the Western markets for the California Bureau of State Audits, the Wyoming Industrial Energy Consumers and the Nevada Bureau of Consumer Protection. I have been an invited speaker on numerous occasions and have previously testified in Massachusetts, Vermont, Rhode Island, Colorado, and Pennsylvania.

My resume is attached as Exhibit HS-1.

Q. What is the purpose of your testimony?

A. I am testifying regarding the APS (Company) proposal to acquire and to ratebase the PWEC generating units.

II. SUMMARY OF TESTIMONY

Q. APS is requesting approval to ratebase five generating units owned and operated by its Pinnacle West Energy Company ("PWEC") affiliate. What is your view of APS' proposal?

A. The ratebasing of the five PWEC generating facilities would substantially increase APS' revenue requirement and rates to APS' customers. The Company has failed to demonstrate that approval of its request is warranted.

Q. Please summarize your conclusions and recommendations.

A. My conclusions and recommendations are as follows:

(1) The Commission should review the Company's proposal to ratebase the PWEC generating units on a prospective basis and in the same manner as it would review a comparable acquisition from an unrelated entity.

(2) The adverse impacts of the Company's proposal are significant.

(3) The Company's proposal would require that the winning short-term bids and associated PWEC contracts in the Track B solicitation – which were from PWEC itself – be foregone. The foregone benefits are substantial and in the long run, APS' proposal would impose significant net costs on ratepayers.

(4) A Commission disapproval of the Company's proposal to ratebase the PWEC units would not mean that the Company would have to rely entirely on the market as a replacement. For example, were the Company to retain the Track B PWEC contracts and construct (and ratebase in 2007) new units that are similar to the PWEC units (i.e., 1,700 MW of combined cycle plants), the total costs to ratepayers would be comparable to the costs of the Company's proposal.

(5) Nor would disapproval mean that the Company and its customers would have to face a lower level of reliability. The Track B contracts secure the supplies for APS in the near term and longer term options can be developed.

(6) The foregoing example (paragraph 4) should be seen as a "ceiling" price or cost and is not recommended as an alternative resource plan for APS because, with proper resource planning and implementation, the Company should do no worse than the example and perhaps could do significantly better.

(7) I recommend that the Commission reject APS' ratebasing proposal.

(8) However, if the Commission decides for some reason that the PWEC assets should be ratebased, the amount allowed in ratebase should be no more than the current value of the units, which is below their book value, adjusted to reflect the value lost in foregoing the PWEC Track B contract.

(9) APS' proposal to ratebase units that it would acquire from another entity is, in terms of its implications for industry structure, no different than were it to ratebase power plants that it built itself. Hence, if the Commission determines that, in principle, the ratebasing of purchased or self-built power plants is consistent with its views regarding industry structure, the Commission should make clear that APS has the authority to build, own and operate new generating facilities.

Q. Please provide an overview of the balance of your testimony.

A. (1) In Section III important background information is provided.

(2) In Section IV, I discuss the principles that the Commission should consider in order to evaluate APS' proposed resource acquisition.

(3) Section V is a discussion of APS' Application.

(4) Section VI is a discussion of generation supply options.

(5) In Section VII, I summarize my conclusions and recommendations.

III. BACKGROUND

Q. Please describe the generating assets that APS is proposing to add to its ratebase.

A. APS is proposing to add to its ratebase five generating facilities owned and operated by PWEC within the State of Arizona (the "PWEC Assets"). These units are Redhawk Units 1 and 2 (1,060 MW total), West Phoenix 4 (120 MW), West Phoenix 5 (530 MW), and the Saguaro Unit (80 MW). All but the Saguaro CT 3 facility are natural gas-fired, combined cycle generating units. The Saguaro unit is a natural gas-fired combustion turbine. The sum of their peak season, summer capacities, as identified in Table 1 to Company Witness Bhatti's Direct testimony, is 1,700 MW.

Q. What are the essential features of APS' PWEC ratebasing proposal?

A. The proposed ratebasing of the PWEC Assets would affect both ratebase and the income and expense items that contribute to revenue requirements.

Q. How will ratebase be affected?

A. The amount that APS proposes to add to ratebase would equal the gross plant investment in the PWEC Assets as of June 30, 2004 (including some transmission plant associated with the Redhawk facilities), adjusted downward to reflect accumulated depreciation and accumulated deferred income taxes. This calculation is reflected in Mr. Robinson's workpapers (see Workpaper DGR_WP 1, at 1) on a system level (i.e., including some small non-jurisdictional wholesale contracts). The amount to be added to ratebase, $889.2 million, equals the amount in that workpaper (i.e., the $895.1 million in the "Ratebase" line for June 30, 2004), multiplied by an ACC-jurisdictional allocator (see Schedule B-2, page 1 of 3). The Company's revenue requirement will increase as a function of the allowed rate of return applied to this ratebase increase.

Q. In what other manner will rates be affected?

A. Ratebasing the PWEC Assets would also affect various expense items and offsetting revenues. The Company's revenue requirement will increase as a function of the net amount of the return, the expense, and the revenue adjustments.

Q. Has the Company indicated what the overall impact of adding the PWEC Assets to ratebase would be?

A. Yes. In its August 7, 2003 letter to Commissioner Gleason the Company explains the impact of adding the PWEC Assets to ratebase by describing the net impact on the revenue requirement. The Company indicates that, by adding the PWEC Assets to ratebase, revenue requirements would increase (on an annualized basis) by $106.6 million.

Q. What are the rate implications of a $106.6 million increase to the revenue requirement?

A. A $106.6 million increase to the revenue requirements corresponds to an approximately 6 percent increase in rates, based on the figures introduced by the Company in Schedule A-1.

Q. Has APS made any investment in the PWEC Assets?

A. No. To my knowledge the PWEC assets were built by and currently belong to APS' affiliate, PWEC.

Q. Does APS currently use the PWEC assets to serve its customers, as APS Witness Bhatti claims?

A. APS has a contract with PWEC that entitles APS to purchase the output of PWEC's Redhawk, West Phoenix and Saguaro units during the summer peaking season (i.e., June through September) starting in 2003 and ending in 2006. APS does not, however, own these assets, and they are not part of APS' investment in generation plant.

Q. Is approval from the Federal Energy Regulatoy Commission ("FERC") necessary before the ratebasing transaction proposed by APS can proceed?

A. The Company indicates that PWEC would be required to make an application under Section 203 of the Federal Power Act and receive FERC authorization to transfer the PWEC Assets to APS (see response to AzCPA 1-92). Until FERC issues its ruling, there will be uncertainty regarding whether, when or under what conditions FERC would allow the transfer to proceed. If FERC imposes conditions that have cost implications for APS, the economics of the proposed transfer may be affected.

IV. STANDARD OF REVIEW

Q. According to the Company, how should the Commission evaluate the prudence of adding the PWEC Assets to APS' rate base?

A. The Company's view, described broadly, is that since PWCC's planning was "APS-centric", it is the prudency of PWCC's planning and PWEC's implementation of those plans that should be scrutinized and evaluated by the Commission. The Company proposes that the Commission's evaluation focus on what was known at the time of those PWEC actions.

Q. Is this the proper timeframe to evaluate in this case?

A. No, it is not. APS' investment in the PWEC facilities should be evaluated relative to circumstances at the time that APS proposes to make the investment. As described by Staff Witness Linda Jaress, the Company's claim that these assets should be viewed as if APS had itself built these units to meet APS loads is unfounded.

Q. Do you agree with the Company's claim that planning was "APS-centric"?

A. No, I do not. A better way to describe the planning for these assets is that it was Pinnacle West-centric. First, as described by Linda Jaress, the Company's quarterly and annual reports issued contemporaneously make clear that the generation planning done at that time was focused on developing merchant (unregulated) generation to sell into competitive markets in the West, not exclusively the APS market. This can be construed to be "APS-centric" only to the extent that the APS service territory was central to the portions of the western markets to which the PW merchant strategy was targeted.

Second, while Mr. Hieronymus points to 1999 planning studies that, he contends, support the "APS-centric" assertion, that seems to be unlikely. He points out that these studies demonstrated that PWEC's low-cost competitive position would enable it to be the successful bidder for 100 percent of APS's load requirement. My interpretation of Mr. Hieronymus' statement is that a more plausible conclusion is that the study was focused on PWEC as a market-based competitor for APS load, not as an "agent" or other form of dedicated provider. PWCC and PWEC may have concluded that they had a distinct market advantage in competing for the APS load as part of their overall strategy, which would include sales, not only to APS, but to other potential purchasers as well.

Q. Please describe the approach you utilized in assessing APS' request to include the PWEC Assets in ratebase.

A. I reviewed the Company's proposal on a going-forward basis. Also, my review was indifferent to the affiliate relationship between APS and PWEC. That is, it is my view that the proposal should be reviewed in the same manner as would a transaction between APS and an unaffiliated seller of generation assets. More specifically, I examined whether APS has demonstrated that the PWEC Assets represent the best, most cost-effective additions to APS' supply portfolio, given full consideration of the attendant benefits, costs and risks to ratepayers as evaluated relative to the full range of alternatives. In my view, the appropriate measure of the merits of APS' proposal to acquire the PWEC assets in question is on a current market economics basis.

From this perspective, I have assumed that the Track B contracts are commitments already made by APS. This is important on a going-forward basis as the APS ratebasing proposal includes the elimination of the PWEC Track B contract.

Q. Does the Company's application satisfy the foregoing standard?

A. No, it does not. The Company focuses a great deal of its attention on the applicability of the prudency standard to actions by PWCC and PWEC when these facilities were planned and built. Company Witness Hieronymus asserts that an analysis of the contemporary economics of these assets is inappropriate and, accordingly, the Company does not present any systematic appraisal of the current market value of these assets.

On the other hand, the Company does reference several analyses that, it argues, demonstrate the value of the PWEC assets to APS ratepayers. These analyses assess the purported ratepayer benefits of the PWEC units on a going-forward basis; but, as I will describe, they are limited in scope and inappropriate to addressing the standard I propose. What the Company's analyses do not do is assess the PWEC assets in relation to the options available to APS today, using current cost assumptions, and performed in light of proper supply planning objectives and constraints regarding, for example, reliability, resource mix, fuel diversity, location, exposure to price volatility, water use, emissions, and efficiency.

Q. Even if one were to apply the prudence standard that APS appears to have proposed, has APS demonstrated that the PWEC assets were prudent?

A. If the Commission accepts the Company's request to review PWEC's planning at the time those investments were made by PWEC, I would recommend that APS (as the regulated entity) be required to demonstrate both that (a) PWEC's planning was indeed focused on meeting APS' requirements for additional generation supplies and (b) that its planning was tied to what would have been optimal for APS rather than for PWEC (or Pinnacle West Capital Corporation). In addition, for inclusion in rate base, APS would need to demonstrate that the acquisition is "used or useful" in light of present circumstances.

To satisfy the foregoing, PWEC's investments should be evaluated individually rather than as a group. With respect to prudency, APS should be required to demonstrate that, for each unit, at the time the investments were made, it represented the best option available for APS. To do so, the Company should be required to produce planning documents prepared at the time that show that the PWEC investment was optimal for APS, given due consideration of all pertinent factors, including but not limited to the following:

- Whether the PWEC unit would be part of a generation expansion plan (specific for APS' requirements) that would have been cost-effective (for APS) relative to other supply- and demand-side options. By way of example, the Company could produce production cost runs and results for APS' own load, similar to those included in its 2003 Long Run Forecast (see the response to LCA 16-365) that existed at the time of the investment in a given PWEC unit;
- Whether the PWEC unit would contribute to meeting APS' need (as distinct from a more general need in the region) for incremental generating capacity and/or energy. By way of example, the Company could produce load and energy balances for APS' own load, with and without the PWEC unit in question, as existed at the time of the investment in a given PWEC unit; and
- Whether the PWEC unit would offer a hedge against outcomes that would be adverse to the interests of APS ratepayers. By way of example, the Company could produce "stress tests," as existed at the time of the investment in the PWEC unit, that show how ratepayers might benefit during a run up in fuel prices if the PWEC unit in question were available as part of APS' supply portfolio.

The Company's application does not provide the contemporary information that would allow the Commission to evaluate in a systematic, comprehensive manner PWEC's decision processes relative to APS' needs and APS' options in light of conditions known at the time that each PWEC investment decision was made.

V. ASSESSMENT OF APS' APPLICATION

Q. Does APS have an immediate need for incremental generation supplies?

A. APS' needs for incremental generating capacity are summarized in Attachment AB-2 to the Direct Testimony of Company Witness Bhatti. Attachment AB-2 provides a view of APS' need for additional generating capacity (i.e., MWs) – it does not address APS' energy needs or other aspects of its resource requirements. Attachment AB-2 indicates that the Company has sufficient generation supplies during 2003. A relatively small capacity need appears in 2004, the year in which APS proposes to include the five PWEC units in ratebase. Attachment AB-2 identifies a need for 161 MW of additional generating capacity in 2004, increasing steadily thereafter.

Q. Does the Company's filing address its overall needs for incremental generating capacity?

A. No. The Company's ratebasing proposal would have no effect on its incremental capacity needs during 2004 through 2006. The Company's filing addresses only a part of its incremental capacity needs for 2007. As I explain in more detail below, the Company's filing focuses on whether ratebasing the PWEC Assets is a good choice relative to (1) ratebasing a similar set of new generating units in 2005, and (2) relative to purchasing a like amount of power (i.e., quantities that the PWEC Assets would be able to produce) from the wholesale power market. The Company's filing does not address whether replacing the Track B PWEC contract with the PWEC Assets would be appropriate. Nor does the Company address important resource planning questions within the context of the overall capacity (or energy) needs of the Company.

Q. Does APS need to acquire 1,700 MW of generating capacity to serve its customers in 2004 when it proposes to put the PWEC Assets into ratebase?

A. No. But for a relatively few megawatts – i.e., the 161 MW need for 2004, representing an amount less than 10 percent of the PWEC capacity, and which could be met through short-term market purchases – additional capacity is not needed in the immediate future because of the Track B contract with PWEC.

Q. In his Direct Testimony, Company Witness Bhatti describes a load pocket in the Phoenix area. Does APS have a need for incremental generation supplies to effectively respond to this load pocket?

A. I have not performed an independent assessment of the situation, although I would like to comment on it. A load pocket can introduce problems both from the standpoint of reliability and costs. APS should certainly take all reasonable steps to evaluate its system to determine the degree to which a load pocket does or will exist, and should respond to its findings in an appropriate manner. That said, APS has contractual rights to the output of the PWEC facilities during the summer peak season through 2006. It seems unlikely that ratebasing those same generating units would affect its position relative to potential load pocket concerns. APS may identify needs relative to the load pocket in 2007 and beyond, but an appropriate response -- whether it includes some of the PWEC Assets, or other strategies – should be developed in the context of a comprehensive resource plan.

Q. Does the state of the wholesale power market affect APS' power supply options?

A. The Company states that it cannot rely on the wholesale power market that serves Arizona as a reliable source of low-cost power, implying that it has a need for owned generation supplies.

APS witness Bhatti warns that the current capacity surplus in Arizona could disappear by 2006, leading to potential shortages and higher prices. In addition, Dr. Hieronymus projects that the western power market will cease to be surplus sometime between 2005 and 2008. I have not performed a study of the supply/demand balance in Arizona, so I cannot comment directly on these forecasts.

Q. What are your views regarding the foregoing?

A. If the market is such that the Company should have additional owned generation, that case should be made by a full examination of all options, and the associated risks, on a going forward basis. This would necessarily include a demonstration that the present acquisition of the PWEC Assets is the best option.

I have examined a simple alternative to this option: that is, retention of the Track B PWEC contract through 2006 and the construction by the Company of 1,700 MW of natural gas-fired combined cycle units to be ratebased in 2007. See Exhibit HS - 2. The cost of this alternative is comparable to, and probably slightly lower than, the Company's proposal in this case. It appears that the Company has reached essentially the same conclusion. See Exhibit HS - 3.

Given this option, which I assume the Company can improve upon, there is assurance that the alternative to the PWEC Assets need not be either a lower level of service reliability or a heavier reliance on the market. Another advantage is that the Company would have some time to explore other options, which might provide either short or long term benefits to its customers. In other words, if the Company is persuaded that market prices will quickly increase, and that the potential benefits of the market are associated with unacceptable risks, options other than the PWEC Assets are available.

If the build option I just alluded to were indeed to be available, the Commission may need to clarify that APS has the authority to build, own, and operate its own power plants. As I state elsewhere, I do not believe that there are fundamental differences, as regards industry structure, between ratebasing a power plant that is purchased from another entity and one that is self-built.

Q. Given the foregoing, what are the shortcomings of the Company's application?

A. The Company did not make a presentation based on the current market value of these assets. Nor does the application contain the information needed to assess the current value of these assets and the suitability of these assets to meet the requirements of APS customers. More specifically:

1. The Company has not presented an estimate of the current value of these assets based upon a comprehensive resource plan, which in my view, is essential.
2. In addition, it is my view that, as a matter of policy, where major transactions – such as the Company's proposal here – are contemplated between affiliated entities, there should be proper, independent (that is, qualified third party) verification of the operating history and present condition of the assets. It does not appear that such a review has been undertaken.
3. The Company's analysis does not reflect the benefits of the power supply commitments made by PWEC to APS in Track B.
4. The Company has failed to provide a clear view of its target resource portfolio and related supply planning objectives. Without this essential context, it is impossible to evaluate the extent to which the acquisition of the PWEC assets would contribute to or detract from important planning goals.

Q. Why do you believe it is important for the Commission to have accurate information on the current market value of these assets?

A. In any situation wherein a regulated entity is seeking approval of a major asset acquisition, a comprehensive and transparent resource plan that demonstrates its value should be required. In this case, where the buyer and seller are affiliated entities, the need is exacerbated.

Even under the APS-proposed alternative standard, a current market valuation is important for the Commission to have so that the amount of "consideration" that is provided to PWEC by APS ratepayers is quantified and the terms of the deal are transparent.

Q. Why are you concerned that the APS analysis does not reflect the benefits of the Track B contracts?

Ratebasing the PWEC Assets in July 2003 would negate the very substantial ratepayer benefits achieved through APS' Track B contract with PWEC, which the Company's analysis indicates is quite favorable to the Company compared to market alternatives. The present value of these lost ratepayer benefits is estimated to be roughly $[redacted] million, based upon the Company's August 2003 market price projections. See Exhibit HS - 4.

Q. Please explain your concern regarding the fact that APS has not addressed its broader portfolio planning objectives.

A. The Company has failed to properly define its need for additional generating resources. While it has indicated its need for additional generating capacity (i.e., MWs), the basic planning objectives that should govern additions to the Company's resource portfolio are unclear. In my view there are many planning considerations that bear on this proposal that would be important to the Company and to the Commission. These may include the following:

> Reliability – Testimony presented by APS witnesses raises questions regarding reliability of supply to its customers. However, the Company's filing contains no comprehensive presentation regarding the resources that it should acquire to ensure supply reliability, or the degree to which it would be appropriate to rely on owned versus contract supplies.

> Price Security – Testimony presented by APS witnesses also raise concerns regarding risks (levels, volatility) in the price of power to customers. However, the Company does not explain in an effective manner how its supply plan, which is dependent on prices in natural gas markets, would hedge against electricity market price volatility.

> Generation Mix – The PWEC supply additions proposed by the Company are dominated by combined cycle generating capacity. It has not

demonstrated that such additions would best serve the energy requirements (i.e., as distinct from capacity requirements) of its customers. For example, there is no indication whether a supply plan that relies more heavily on peak season purchases (similar to that implicit in the Track B PWEC contract), or combustion turbines might be more beneficial to APS' customers. Environmental goals also might affect APS' optimal generation mix.

Fuel Mix – APS' filing makes a limited presentation on the fuel mix that would be achieved by ratebasing the PWEC assets. However, it does not explain why it is the best mix for ratepayers.

Open Access Policy – The Company should address the impact that its supply plan would have on efforts to open Arizona's wholesale and retail power markets to competition. Moreover, APS has not addressed its anticipated role in securing power supplies for its customers, or why such approach is consistent with overall planning objectives.

Rate Impacts – As noted above, ratebasing the PWEC proposal would have a substantial near term impact on rates. Other near- and long-term (including contract) supply options could have significantly different rate implications. The Company's filing is silent on this important issue.

In short, the Company has failed to set a foundation that would enable the Commission to understand why the PWEC Assets represent the best means by which to meet the needs of APS' customers relative to its alternatives available today and in the future.

Q. Is the Company familiar with the critical elements of a proper resource plan?

A. Certainly, it is. For example, in his July 2003 presentation to the Pinnacle West Board of Directors, Company Witness Wheeler made a presentation entitled "[redacted]." That presentation included a slide entitled "[redacted]" which includes "[redacted]

[redacted]" See Exhibit HS - 5.

Q. Should the Company be expected to provide the Commission with the critical elements of a resource plan?

A. As with any new acquisition of new generating assets, APS should be expected to demonstrate how its chosen supply plan would reasonably balance important policy considerations and compliment its overall resource plan.

Q. What statements has the Company made in its filing regarding the benefits that it claims will result from ratebasing the PWEC Assets?

A. The Company points to a total of five different amounts reflecting the savings projected to accrue to ratepayers if its application is approved. In each instance, the savings identified consider neither current conditions in wholesale power markets nor the full range of supply options that currently may be available to APS. The Company's savings estimates leave unanswered the question of whether it currently has access to other supply options that would outperform the proposed PWEC ratebasing.

Q. Do these savings estimates offer a clear view of the costs and benefits if the PWEC Assets are included in ratebase?

A. No, they do not. My view is that, contrary to the Company's estimates, the rate base proposal will be more costly to ratepayers in both the near and longer term; one important reason for this is that the Company's proposal would negate the favorable Track B contracts.

As for the Company's going-forward savings estimates, it is my view that the figures presented are inadequate, leaving the Commission without the information necessary to evaluate its request. An assessment of the savings that its proposal would offer relative to a full range of resource options would have been more proper. Instead, and for example, two of the Company's savings estimates derive from analyses that show only that the investment and carrying costs of *used* facilities likely will be less than those a similar set of *new* ones, which is what one would expect. I will discuss these and the other Company estimates below.

Before doing so, however, it is important to not lose sight of a key problem with each of the Company's estimates: none accounts for – that is to say nets out – the impact on costs of the loss of the Track B contract benefits. In other words, each of the Company's estimates implicitly assumes that the status quo does not include these deals.

Q. But since APS' Track B contracts with PWEC expire in 2006, won't it be a good deal for ratepayers to include the PWEC assets in APS' rate base after that date?

A. APS' case does not establish that. The Company has not proposed ratebasing the PWEC Assets in 2007, nor has it identified the costs of ratebasing the PWEC Assets in 2007. The Company has not stated whether PWEC would allow its assets to be transferred in 2007, nor whether APS would have other less expensive alternatives.

Q. Please identify the first of the Company's "savings" statements and explain your concerns.

A. Mr. Wheeler states in his Direct Testimony at 12 that "the reduction in the Company's acquisition cost will save APS customers approximately $214 million in future revenue requirements…". Mr. Bhatti restates this figure in his Direct Testimony at 4.

The Company is proposing to place the PWEC Assets into ratebase at their book value as of June 30, 2004 (see Wheeler Direct Testimony at 12, lines 2-3). Because the plants will be partially depreciated at that time, the amount ratebased will be roughly $73 million less than the original cost of the assets. The $214 million figure represents the future value of the revenue requirements reductions associated with the $73 million difference between the costs of the plants new and their partially depreciated cost. A fair analogy would be to suggest to a prospective car buyer that he/she will save thousands of dollars in car loan payments over the term of the loan, if a less expensive used car is purchased rather than a new one.

However interesting that may be for other reasons, it does not answer the key question here: of the options that are or may be available -- including the Track B contracts, which indeed are available – is this the right choice? In other words, such assessments, particularly with respect to major proposals, should be based upon a comprehensive resource plan. By way of example, if one compares the Company's proposal to an alternative wherein it (a) keeps the PWEC Track B contract, (b) builds units comparable to the PWEC Assets (1,700 MW of gas turbine-based generation) and (c) puts them into service and in rate base in 2007, the overall capital cost to APS' customers would be comparable, with no consideration of the likely efficiency improvements in newer equipment. With the inclusion of some reasonable estimates of the efficiency (heat rate) improvements, the alternative plan improves substantially. This example, which is offered as an upper bound ("ceiling"), is not intended as an alternative resource plan; but it does indicate that there are indeed likely to be preferable resource options which do not compromise reliability. This example is discussed in more detail in Section VI and in Exhibit HS - 2.

Q. What is the Company's second claim regarding PWEC savings?

A. Mr. Wheeler states in his Direct Testimony at 12 that "compared to the cost of APS constructing new generation assets in 2004 of comparable size and type, life cycle savings [are] nearly $500 million." Mr. Bhatti also restates this figure in his Direct Testimony at 4.

Q. What is the nature of the $500 million savings figure identified by Messrs. Wheeler and Bhatti?

A. The $500 million figure simply reflects a comparison of some of the costs of new generating units (assumed to be in service in 2005) to used ones (i.e., the PWEC units). The analysis presented is limited because it considers only the relative costs of the "initial investment" and a return. See Workpaper SMW_WP 17. The analysis excludes consideration of a range of factors relevant to a comparison of the PWEC assets to a similar set of new units. The omissions include the foreseeable improved performance characteristics of newer units, differences in operating and maintenance costs, differences in property and income taxes, etc. The Company's basic conclusion is that, from the standpoint of investment costs, new units cost more than used ones.

Q. What are your concerns with this analysis by the Company?

A. In general terms, the Company compares the future value of revenue requirements (in nominal dollars) of the PWEC Assets to the revenue requirements associated with new generating units that are "of comparable size and type." Wheeler Direct Testimony at 12. On a stand-alone basis, the analysis does not consider various performance and cost factors that are essential to a proper savings analysis. The Company's conclusion is that the foregoing comparison demonstrates that ratebasing the PWEC units would bring savings.

Passing aside my concerns with what the Company did, perhaps the more important concern with the estimate is what it does not do. That is, as with the others, it is not based upon an assessment of properly identified alternative options; nor does it account for the costs associated with the loss of the Track B PWEC contracts. In short, the foregoing analysis should not be relied upon as a reasonable estimate of the going-forward benefits of the Company's ratebase proposal.

Q. What are the Company's third and fourth sets of claims regarding PWEC savings?

A. Mr. Bhatti states in his Direct Testimony at 5 that "cost-of-service treatment of the PWEC Assets was shown by the Company's economic analysis to potentially save APS customers over $519 million (net present value over the life of the assets)." In addition, Mr. Bhatti states in his Direct Testimony at 68 that "ratebasing the PWEC Assets could have been anticipated to yield a benefit ranging from approximately $496 million to $615 million in net present value over the life of the projects.

Q. What is the nature of the $496 million, $519 million, and $615 million savings figures identified by Messrs. Wheeler and Bhatti?

A. These figures represent various calculations of the savings that would result if the PWEC Assets were used to supply power to APS rather than purchases from the competitive wholesale market. The $496 million, $519 million, and $615 million savings figures are the net present value of forecast savings estimates, as calculated using three different discount rates (i.e., 8.25 percent, 8.00 percent, and 7.07 percent, respectively). See Response to LCA 1-1 (APB_WP 23). These estimates are of course quite sensitive to the assumptions made regarding such matters as market prices, generating unit costs, and discount rates. More importantly, these savings estimates leave unanswered the question of the extent of savings, if any, as compared to some other reasonable alternatives (to the PWEC ratebasing) supply plan, including the retention of the Track B contracts.

Q. Please describe the calculation by which the three savings estimates are produced.

A. The calculation compares the busbar costs of producing power from the PWEC Assets to the costs of purchasing a like quantity of power from the market over a 30-year period. The different savings estimates are calculated to reflect different discount rates applied to the two streams of net power costs over the term of the 30 year period.

Q. Do you find the Company's calculations to be problematic?

A. Yes, I have concerns with the calculations. For example, the discount rates used by the Company are significantly below the [redacted] percent rate that the Company presents as reasonable for long-term planning purposes in its 2003 Forecast (see 2003 Long Run Forecast, Response to LCA 16-365, at 4). Alternative estimates, using the same methodology but a higher discount rate and lower market prices, will obviously lower the ostensible savings. For another example, I have concerns with the fact that the results are derived as an average of several similar analyses performed some time ago. No current view of potential savings is included.

And as with the other Company going-forward savings estimates, the failure to include the costs associated with negating the Track B contracts renders it incomplete. Despite my differences with the Company's assumptions here, the analysis does compare the ratebase proposal to another option. However, the exclusion of an available, inexpensive resource – from Track B – means that, all else equal, the claimed savings are overstated.

Q. Please summarize your conclusions regarding the Company's analyses of the savings from its ratebase proposal.

A. While it is proper to assess the potential benefits from the proposal on a going-forward basis, I do not agree with the Company's methodologies, as I have just described. Although there are other issues, which I do not reiterate here, a common theme has been the exclusion of the Track B contracts. Nor do these analyses demonstrate that ratebasing the PWEC Assets would be the best choice after the Track B PWEC contract expires. There are likely to be options other than complete reliance on the market and these should figure into the analyses.

VI. OTHER GENERATION SUPPLY OPTIONS

Q. Does the Company have resource options that are likely to be more cost effective than ratebasing the PWEC Assets?

A. Yes, it does. As I stated earlier, a fundamental problem with the Company's proposal is that it would negate the benefits that could be obtained from the Track B solicitation. The winning short-term bids – from PWEC itself – would provide substantial savings as compared to other near term options. When these contracts are included in the resource mix, the picture changes significantly.

In addition, I would note that the Company received long-term bids [redacted] in the Track B solicitation that over 10- and 20-year time frames provided savings, as the Company itself concluded. The savings depended crucially, however, on how the winning short-term bids [redacted] were treated in the Company's evaluation of the long-term proposals. Specifically, the long-term proposals provided benefits to APS only when the short-term bids were excluded from consideration. Once the short-term bids were included, those results no longer obtained. The upshot is that APS accepted the short-term Track B bids – which it would now negate – and rejected the long-term proposals.

Q. Please explain the importance of the Track B results to the Company's proposal to ratebase the PWEC Assets.

A. The winning bids fill an important need and provide power to APS through 2006 at quite favorable prices. Note that had another entity been the successful bidder to meet APS' needs through 2006, the Company's proposal to ratebase the PWEC Assets – had it been made – would have had to address a near term excess capacity situation, as it would not be in a position to recommend that the winning bids be negated.

The point here is straightforward. The Company's ratebase proposal should be evaluated in the same manner as if the assets were to be acquired from an unrelated entity. Correspondingly, how one treats the results of Track B should not depend upon who was the winning party. The Company's proposal here is in fact to implicitly treat them differently, as it assumes that favorable contracts with the affiliated PWEC can be negated. Contracts with unrelated third parties clearly would have to be dealt with differently.

Q. You mentioned that the Company has more cost-effective alternatives than its ratebase proposal here. Please explain that statement.

A. First, as I mentioned earlier, the Company prepared an assessment of the revenue requirement differences between its proposal in this case and a scenario in which the Track B PWEC contract was retained and new units were built (otherwise obtained) and ratebased in 2007. The Company, using a production costing tool, concluded that the latter had lower long term revenue requirements on a present value basis. See Exhibit HS – 3.

We did something similar, essentially as a check of the Company's analysis, albeit in spreadsheet form.[1] Specifically, we compared the Company's proposal to a scenario in which (1) the short-term bids from Track B were in APS' resource mix until 2006 (per Track B) and (2) APS constructed (and added to rate base in 2007) 1,700 MW of natural gas-fired power plants. As shown in Exhibit HS - 2, on a capital cost basis only, our analysis shows that this alternative is approximately the same as the Company's ratebase proposal. That exhibit also shows the impact of the potential improvements in the efficiency of new generating plants relative to the PWEC Assets.

Because there has been a rather steady improvement in gas turbine-based power plant efficiencies, it is also reasonable to assume that units that are newer than the PWEC Assets would have improved heat rates. Based upon reasonable assumptions about gas prices and hours of generation, a conservative one percent improvement in heat rates would save on the order of $22 million in present worth terms. As shown in Exhibit HS - 6, a 2.5 percent improvement would lead to roughly $56 million in savings. The efficiency gains should be considered in the comparison of the Company's proposal with the foregoing alternative. I would also note, however, that while it is reasonable to expect efficiency gains, the proper way to assess their magnitude would be to utilize a production costing tool, so as to model the entire system. Hence, the forgoing estimates should be considered to be indicative only.

Q. What do you conclude from the foregoing analysis?

A. Obviously, the spreadsheet analysis summarized in Exhibit HS – 2 is not a "least cost" plan. The plan to implement should be much more comprehensive and be developed by the Company. With proper planning, the Company should do no

[1] The methodology is explained in Exhibit HS – 2.

worse and almost certainly could do better. In other words, we have not developed a 'least cost' plan, but, rather, a "ceiling price."

One can be reasonably confident from the Company's analysis, as well as ours, that if the Company's proposal here is rejected, the alternative need not be complete reliance on the market nor any degradation in the reliability of service. The analyses indicate that if the Track B contracts are retained, the Company should be able to ensure that it could provide power to its customers, with no degradation in reliability, at a comparable or better price.

VII. RECOMMENDATIONS TO THE COMMISSION

Q. What are your conclusions regarding the Company's proposal to ratebase the PWEC Assets?

A. The conclusions based on our review of the Company's proposal are:

- APS' proposal does not include a current economic assessment of the long term value of the PWEC assets to APS ratepayers;
- APS has not made a current least-cost planning case for these assets;
- The long term economics of the proposed acquisition of the PWEC assets at book cost is, at best, near break-even and, quite possibly, significantly uneconomic due to the availability of other economic options to APS;
- APS's ratebasing proposal would result in the loss of the near-term benefits from the cancellation of the PWEC Track B contract; and
- With the Track B results, APS has some time to assess longer term options and maintain cost effective and reliable service in the near term.

Q. Please summarize your recommendations.

A. Based on the foregoing conclusions, I recommend that the Commission:

- Review APS' proposal as it would a current, arms-length acquisition of assets;

- Reject the Company's rate-basing proposal for the PWEC assets;
- Retain the Track B contracts; and
- Clarify the Company's authority to build generation assets for the purposes of serving its load obligations.

Q. What is your recommendation in the event that the Commission determines to include the PWEC Assets in ratebase?

A. Two things are clear from the Company's presentation. First, because APS has failed to consider a full range of resource options available at this juncture, it has not shown what level of net benefits, if any, would be achieved through ratebasing the PWEC Assets. Second, ratebasing the PWEC Assets would eliminate $[redacted] million in ratepayer benefits implicit in the Track B PWEC contract, resulting from the Track B costs being less than market prices. The amount of the Track B benefit is calculated from APS' own estimates and is consistent with the view of market prices that APS takes in this case. Under the circumstances, protecting ratepayers requires that if the Track B PWEC contract is to be eliminated, the associated savings should be preserved.

Q. How might the Commission act to protect ratepayers?

A. There are probably several approaches that could be implemented to ensure that ratepayers do not lose the benefits of the Track B PWEC contract. I recommend that the Commission implement a $[redacted] million downward adjustment to the revenue requirement calculated under the "ratebase PWEC" scenario. See Exhibit HS – 4. This $[redacted] million downward rate adjustment would be applied across the term of the Track B PWEC contract, and is sufficient to ensure that the $[redacted] million in Track B savings would be preserved for ratepayers.

Q. Are you concerned by the fact that APS has not engaged a qualified third-party to perform a current, independent assessment of the condition and value of the PWEC Assets?

A. In my view, as I alluded to earlier, there should be a "standard procedure" under the circumstances. The problem might best be seen in relation to the RFP for assets currently being conducted by the Company. If APS determines to purchase assets from another generation developer, it may be sufficient for the Company to rely on its (internal) expertise to verify that the assets are worth the selling price. This is a proper approach in an arm's length transaction. But it is improper to ask the Commission to ratebase the PWEC Assets on the basis of either the Company's or its affiliate's representations regarding, for example, the physical condition of the assets. In this instance, the proposed transaction between PWEC and APS is not at arm's length. A reputable entity should have been engaged to opine on the condition of the power plants.

I should stress that I have no information that would lead me to believe either that APS does not have the requisite expertise or that there are any problems with the generating plants. Nonetheless, I think that it is proper as a general policy matter to require, in major transactions between affiliates, that there be third party due diligence.

Q. How does the lack of a proper due diligence assessment affect your recommendation to the Commission in this proceeding?

A. In my view, if the Commission determines to ratebase the PWEC assets, it should establish performance standards (e.g., regarding such matters as availability and heat rate) whereby APS is penalized if the units perform at levels below what would be expected of units of their type and vintage.

Q. Has APS asked the Commission to approve the PWEC contract that resulted from the Track B solicitation?

A. Yes. APS witness Wheeler requested that the Commission approve and "assure cost recovery" of the recently executed Track B contract between APS and PWEC.

Q. Does Staff recommend that the Commission approve the APS/PWEC contract?

A. It is my understanding that the Commission does not ordinarily provide approvals for contracts of this type. Instead, the Commission reviews the reasonableness and prudence of the *costs* incurred under the contract. This review generally takes place after the fact. Because the costs incurred under this contract are so favorable for ratepayers, I recommend that the Commission take the highly unusual step of approving them in this proceeding.

Q. Does this conclude your testimony?

A. Yes, it does.